BRANFORD ELECTRIC RAILWAY JOURNAL

Members' Day 2016

865 debuts, 13 cars in operation

Under a cloudless noon-time sky Connecticut Company car #865 boldly broke through a ribbon stretched across the Branford Electric Railway's main line and with this made its official debut after 67 years in the museum's collection. This was certainly the lead story at our annual Members' Day celebration, but equally important were the other cars which surrounded 865 at this moment: on the inbound mainline track, Toronto 2898 and Brooklyn 1792, and on tracks 31 and 32, New Bedford 302, Rhode Island 1504 and Montreal 2001. What do these cars have in common? They were all inoperable after the August, 2011 Irene flood, and all have been repaired and returned to service.

(*B. Coughlin*)

The day as always starts early. Many members were on site before 9:00 AM, getting cars ready. The first cars were rolling around 10:00, and members began to line up at the renovated "Shack" where they could sign up to operate a car during the course of the day. In total 39 requests were put in, and all but 3 were fulfilled before 4:30.

Railway dispatching was handled by Lou Levinson, with guest sign-ups coordinated by Jeff Hakner. Qualified operators and pilots included: Rodger Addil, Jimmy Boylan, Thurston Clark, Paul Davy, Bill Dobkins, Mike Hildreth, James Landi, Dennis Pacelli, George Papuga, Rob Paradis, Walter Rothaug, John Soehnlein, Ben Sternhell and Mark Sullivan. John Hyland and Terry Berry were switch-tenders at Edgewood and Narragansett. Wayne Sandford, Christine Sandford, Dee Levinson and Adare Ghist managed the lunch service. We are all at Members' Day to relax and have a good time, so a special thank you to everyone who volunteered to perform these tasks which make the entire day go smoothly.

A little before noon, Wayne gathered the crowd around the new front porch of the Shack to say a few words. He briefly filled in the membership on current events and plans, and expressed appreciation to officials of the CT Dept. of Emergency Management for their assistance with the ongoing FEMA disaster remediation program. Wayne then presented a volunteer recognition award to Mike Hildreth. The (trolley) star of the show made a grand entrance: car 865 started out of the loop and tore through the outstretched ribbon. The motorman, George Papuga, was the project leader for the car's restoration, which took place for over a decade. This combined with the FEMA-subsidized motor overhaul, funding from the Amherst Railway Society, and new axle bearings via a grant from the Mystic Valley Railway Society culminated in the car's official debut to the members.

George spoke from the doorway of the car about this project and its significance to him. He invited everyone aboard which was of course a challenge, since there were about 90 people and the car seats 42. A double-header was run with 865 and 775; both of these wooden cars spent large portions of their careers on the Branford route. Just then, John Koella arrived. It was planned for him to be on the platform with George and also to make some "brief remarks," but he was unavoidably delayed. John did ride the car on this inaugural run and answered many

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Gene Carson Passes

We received the unfortunate news, just as this issue was going to press, that member **O.E. "Gene" Carson** passed away on May 31st. Gene had been a member since 1966 and held a number of leadership positions at the museum during his long membership, but was most closely associated with Atlanta car #948. A memorial service is planned to be held at the museum on Saturday August 6th at 5 PM. All members are invited to attend. A more complete article about Gene's life and career at the museum is slated for the next issue.

Jimmy Mattina Bequest

James Mattina was a fan of all things transit, a world traveler, and a career transit professional. He visited many railway museums and transit systems both here and abroad, and came to "Branford" about once a year. Although he was not a museum member or active volunteer, Jimmy thought highly of our museum with its significant collection, and hoped to see it and other railway museums succeed and prosper.

Jimmy's many friends remember him as a warm individual with a great sense of humor who would go out of his way to help a friend in any way possible. He spent much of his career with the New York City Transit Authority and was last working as a Project Manager in the Track & Structures department, where he coordinated the "General Orders" for track construction projects. He was very active with the Electric Railroaders' Association (ERA) where he served in various officerships since joining in 1971 and was present at almost all of its trips and meetings. Jimmy was a strong advocate not only of investing in current and future public transit systems, but also in railway museums which preserve the heritage and history of public transit. At ERA meetings, when a slide was shown of a museum operation, Jimmy would often call out words of encouragement: "trolley museums are great -- visit them!"

When Jimmy succumbed after a long battle with cancer on February 7th, 2015, his love of the railway museum world did not end. Through multiple bequests in his Last Will, his legacy will endure. Shore Line Trolley Museum was one of four railway organization beneficiaries and recently received over $75,000 from the Mattina estate. As an unrestricted bequest, Jimmy left it to the discretion of the Board how to allocate the money, who decided that it will be used to (a) enhance the permanent endowment fund (b) support the ongoing flood recovery program and (c) help fund the remaining pieces of the *Elevating the Collection* project. Regarding the last item, we think that Jimmy would have found humor in his money being put into a pit!

The Branford Electric Railway Journal

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Membership News

Jimmy Mattina on a railfan trip to Rahnsdorf, Germany, in May 2003. (*J. Erlitz*)

Let's welcome the following new and re-joining members aboard! Mackenzie Amarone, Anne M. Atherton, John Atherton, Edward Michael Bekalowicz, Calvin Blaser, Ember Bouteiller, Jeffrey M. Cain, Phillip James Christopher, Bruce Clouette, Michelle Cucinelli, Nora Cucinelli, Christian DeLuca, Alisha Desilva, Christopher Dorsey, Leo Erikson, Susan G. Farnsworth, Anthony Foster, Richard S. Foster, Peter Joseph Fuhrman III, Frank Joseph Gallipoli Jr, Frederick Christopher Gerhard, John Haas, Dennis Thomas Hoyt, Kyle Jang, Wallace Jean, Alexander Edward Karnes, Ariel Lambe, Robert A. Loitsch, Emily Mayne, Bridget Mercik, Kevin Mercik, Salvatore Milici, Kara Natzel, Matthew William Nawn, Omar Pagan, Shivam R. Patel, Kaleyshka Santiago, Andrew Serio, Christian Swett, Lisa Ware, Alyssa Wotapka, Julian Zagorodnev, Angela Zappia.

The membership season runs from May 1 to April 30 of the following year. **Check your mailing label.** If it still says **2015** then your 2016 dues were not paid at the time that this issue was printed. Please renew to ensure continuity of your membership benefits. Of 1,043 individual members, 682 had renewed their dues at the time of this report. That's great! If you didn't get your membership renewal package in the mail, or you have any questions about membership, just call the office (203) 467-6927, or email office@ShoreLineTrolley.org

In Memoriam

We mourn the passing of several members: **Les Schiller** of Peekskill, NY was a 26-year member. **Edson Tennyson** had been part of the electric railway scene since the late 1940s, starting out with Pittsburgh Railways. He held a variety of high-level positions with transit agencies across the country and was a renowned expert in his field. His membership at our museum began in 1967!

Ray Berger passed away on March 1st at the age of 74. When he was a young man of 20, Ray joined the Branford Electric Railway Association. He found out about "Branford" from other members of the Electric Railroaders' Association, New York Division, who were also active at BERA. Ray had discovered the ERA just a few years before, joining in June 1958.

Ray remained a faithful and supportive member of BERA and visited frequently. He was more active at the ERA, where he was Division Chairman for a number of years, organized many trips and activities, and attended almost every meeting. Exceptions to this were generally taken when Ray was on the road, riding and "shooting" almost anything on rails, anywhere in the world. He gave a yearly slide show at the ERA, where he often used his soapbox to sermonize on the benefits of rail transit, especially as he saw them applied overseas. He was, of course,

Detailed Departmental Reports

Signal

The rail bonding crew resumed work, chasing after the new track construction crew to apply power return bonds in Building 9 and the run-around track. The re-arrangement of signal and telephone twisted pair line cabling in the vicinity of Barn 3, Barn 5, the Shop and the Shack has been completed. Traction power OFF buttons were returned to service at "Farm River Road." A junction box was installed to re-establish model board indications and controls for "Narragansett Junction" and to bring new track occupancy and switch position indications for the Alex/Loop area. A track relay for the Narragansett area was replaced and shunt-tested. Some proposed modifications of the traffic control involving signals 25 and 28 were tested. The public address system in the Shack was re-connected and was used on Members' Day. Signal volunteers: **Dana Bowers, Dan Mongillo, Andrew Serio, Harry Whipple, Jerry Otrin, Matt Wuensch, Tom Lenhart, Joe Cavanagh, Jeff Hakner, Clay Emerson,** and Gateway interns **Nico & Shane Rasile, John Celotto, Rob Denhardt.**

Track

In addition to new track construction covered under the Elevating the Collection article, track maintenance focused on the access to the re-invented run-around track. Switch ties were replaced beginning at Shepard Switch and all of the switches that lead back to the run-around track from the existing loop track. Many of these ties have never been replaced since installation in the early 1970s. This tie renewal campaign, aided by the warm winter, removes some of the drama in actually reaching the run-around track, which is now seeing periodic usage. Track dept. volunteers included: **Jeff Hakner, George Papuga, Braeden Coughlin, Dennis Hoyt, John Cox, Andrew Serio, Dana Bowers, Dan Mongillo, Rob Paradis, Alex Karnes, Phil Christopher, Joe Perrino, Paul Davy, Joe Cavanagh, Joe Deko, Jim Day, Wayne Sandford, Rodger Addil, Alex Degnall, Finn Riordan, Carol Riordan, Denny Pacelli,** and Gateway College interns **John Celotto, Rob Denhardt, Freddy Gueverra, Andrew Grazio, Stephen Hardy, Brandon LeQuire, Denard Marsh, Mark Palmieri, Nico Rasile, Shane Rasile.**

Buildings&Grounds

The "Shack" is now complete and functional with a finished ceiling and floor, primarily through the efforts of **Anthony Bianco, Clay Emerson** and **Mike Hildreth. The Savage Family** developed an interactive video display in one corner of the tiny building. Although the winter was fairly snow-free except for one blizzard, **Rob Paradis** kept the grounds clear with his trusty loader. He & **Paul Davy** also rounded up and disposed of rubbish around the property. At 14 River Street, **Terry Kennedy** and **Jeff Hakner** did some remodelling that would make most realtors cringe: they removed an unused half-bath/laundry and made it into a network/server closet.

AC & DC Power

Up at building 8, a major milestone was reached during early March as **Jeff Hakner**, filling in for the vacationing **Rich Parente**, completed the work required by the electric utility and watched as the AC power was turned on for the first time. **John Aurelius** assisted. At the moment, the 200A panel has a few convenience outlets and temporary lights. As funding permits, permanent lighting will be installed first in building 8, and then in building 9. "Down below," **Dana Bowers** assisted by **Andrew Serio, Harry Whipple** and **Dan Mongillo**, cleaned up the AC power distribution to barns 1, 3 and 5. In the substation, **Al Santini** serviced the main 3-phase rectifier contactor.

Overhead Line

In the single-wire trolley department, **George Papuga**, assisted by **Jon Cox, Dennis Hoyt** and **Rodger Addil**, took full advantage of the mild winter. Pole Y-5 on the loop was replaced along with a new ground anchor, backguy, spans and insulators. Other poles were prepared for installation by pre-drilling for hardware and painting the tops and bottoms with wood preservative. New spans and insulators were cut-in at poles 101 and 105, in Riverside East curve, and other line components were renewed in that area as needed, including numerous ground anchors and backguys. In the double-wire department, **Ted Eickmann** resumed stringing the trolleybus loop wires alongside the mainline near the W.B. Young switch and over toward the crossing with track 11.

Vehicle Collection

H&M **503: Alan Zelazo** was seen scraping, sanding, priming and painting the seat divider panels, stanchions, door mouldings, ventilators, and vestibule ceilings. Some deteriorated window post caps were patched. Daughter **Stephanie Zelazo** helped. Alan also completed patch-up repairs to the heaters, just in time for spring, and replaced a stuck engineer's valve with a spare. **Victor Gordon** arrived in May for his semi-annual visit and he got right to work -- no horsin' around -- on this car, sanding, priming and painting the cab doors and nearby folding panels.

Public Service N.J. **4584:** has moved to track 52, in the old roofing spot. What makes this spot (just inside the East Haven end doorway) special is an extra insulator in the trolley wire which allows the power to be isolated. **Ted Eickmann** and **Bob Yohe** have begun roof repairs. The old temporary roofing material was stripped off, revealing many deteriorated roof boards, especially in the bonnet (end) area. Water damage extended to some of the supporting posts and rails. This has been patched with new wood, and replacement bonnet slats have been prepared. Inside the car, water-damaged areas of the floor were cut out and replaced with new wood, including complete replacement of the smooth perimeter flooring with new yellow pine. Deteriorated sections of the letterboard (the metal strip about a foot wide just below the roof edge and just above the windows) were cut out and replacement sections (donated from car 4542 that was scrapped in Brielle, N.J.) were welded in, primed and painted. A Tomlinson #8 coupler has been prepared for installation on the #1 end along with the MU jumper socket.

C&LE **116: Paul Hilzen** and **Joe Cavanagh** continued interior refinishing. The sash tracks were all removed, cleaned and re-painted. Re-installation required chasing the screw threads in some of the holes. The car card retainer mouldings were also painted and re-installed. After suitable masking and preparation, the striping of the headlining panels has begun.

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preaching to the choir.

Ray also made his profession in rail transit, working for the NYC Transit Authority in the Car Equipment department. He retired ca. 2001, which gave him even more time to travel. An injury a few years ago made it very difficult for him to walk, but that did not stop him from continuing his adventures. It was on a railfanning trip to Albuquerque, Phoenix and Tuscon that Ray passed, enjoying the hobby that he made his life's work and profession.

Ray Berger in 1988 atop a snowy Brooklyn roof. (*E. Oszustowicz*)

ConnCo **1602** was in the shop during the winter slow season. The concrete of the main flooring area was patched by **George Papuga, John Cox** and **Dennis Hoyt** and the floor paint was touched up. The exterior surfaces of the windows and doors were lightly sanded and sealed, with a touch-up of the white window post paint. **Denny Pacelli** sanded and repainted one dash, then **Rob Paradis** did the striping and numbering.

ConnCo **865**: **George Papuga** did a little bit of touch-up to the platform window areas and installed the motorman's curtains. He and **Rodger Addil** spot painted the trucks and underbody.

ConnCo **1330**: This wooden closed car, similar to 865, is an unrestored body resting on well-worn trucks that resides in Barn 7 where it is used as a workshop. **George Papuga** repaired sections of the floor in January.

Toronto sweeper **S-36**: In addition to flood remediation work described elsewhere in this issue, **Rob Paradis** took advantage of the time in the shop to change the oil in the compressor and replace deteriorated main reservoir drain piping. He stripped down one truck, made easier since the motors were now out, and repainted it. Rob also worked on the "mud guards" which are the sheet metal pieces that deflect trackway dirt, kicked up by the wheels, away from the underbody.

Rhode Island **1504** was over the pit in to replace a few broken grid plates. **Rob Paradis** also lubricated the car, which made several trips on Members' Day.

Montreal crane **W-3**: **Denny Pacelli** and **Rob Paradis** replaced four broken grid plates, cleaned and repaired the toolbox, and adjusted the gravity sensor. Denny cleaned and lubricated the A-1 emergency valve, and cleaned, lapped and lubricated the brake valve. New gaskets were also made. New truck side-bearing safety clips were fabricated by a steel vendor and installed.

Toronto **2898**: As described elsewhere in this issue, the car returned to service on Members' Day. A week earlier, with motor work wrapping up and a successful test run, **Bob Dusel** washed the car's exterior.

New Bedford **302**: **Denny Pacelli** replaced the brake cylinder packing cup. **Rob Paradis** assisted with brake valve servicing.

Newark PCC **25**: This car was acquired in 2014 (see issue 2014-1) and not accessioned as a historic artifact (the museum already has nearly identical car 27) but rather obtained for potential utility purposes, such as a wheelchair-accessible car. It was not operable when it arrived, having been in dead storage for a dozen years, but was fixed up within a few months, so that it at least moved itself around the yard. With the objective of making the car operate more reliably and smoothly, a group of volunteers associated with Rockhill Trolley Museum, which has Newark car #6 and operates it for their visitors, came here during April and had the car on the pit for several days. These volunteers, **Gerald Evans, Matthew Nawn, Steven Goehring, William Monaghan, Jr.** and **George Rich** were assisted primarily by **Bill Wall** and **Alan Zelazo**. The non-functioning backup controller was put into working order, and a number of power resistors were changed, including the main "KM" unit. The car made a test run down the line right after Members' Day activities wrapped up. Additional work will be needed at a future time.

NYCTA **6688** was serviced just prior to Members' Day, along with *NYC BOT* **1689** and *IRT* **5466**, with inspection of the compressors, replacement of trolley shoe carbons, lubrication of journals and axle bearings (as applicable), inspection of motor and M-G brushes: **Joe Marcarelli, Thurston Clark, Ben Sternhell, Roberto Tillman, Lou Guadagni, Greg Gil, James Harris.**

Ted Eickmann hums a Sousa tune as he strings trackless wire near Barn 1. (*J.Hakner*)

Bob Yohe, roof work, car 4584. (*J.Hakner*)

Members of the New Haven Society of Model Engineers install a G scale shelf layout in Sprague. (*R.Addil*)

Mike Hildreth (l) receives a volunteer recognition award from Wayne Sandford. (*J.Hakner*)

Ron Parente (museum Vice President) is being loosely piloted by George Papuga as 302 goes down the line. (*K.Rosen*)

Brooklyn 1792 comes back in. That sure looks like Steve "Supercop" Krokowski as the operator, with Joe Marcarelli and Jimmy Boylan supervising. (*B.Dobkins*)

PAGE 4: The 2016 training class and instructors (l-r) Bill Dobkins, Dexter Cheney, Andrew Serio, Joe Deko, Steve Brunelle Jr., Roberto Tillman (seated), Dan Mongillo, Jan Maier, Tristan Mountanos, Barry Zuckerman, Shivam Patel, Ed Bekalowicz, Rodger Addil (seated), John McCarthy, Harry Whipple, John Proto (seated), Mike Kelley, Peter Callahan. (*J.Hakner*) L: Mike gives student Harry some instruction on inching up. (*R. Addil*)

from front page

questions from members about the car's history both in service and at the museum. As noted in the Dec. 2015 issue, it was John who began the restoration of this car in the late 1990's and then handed the project to George.

Almost everyone went down the line to either ride or photograph 865 and 775. During this break, lunch was set up in Barn 1. Operations continued during lunch and picked up again afterward. In addition to 865's flashy premier, Toronto 2898 was quietly reintroduced. Used as "Santa's Car," it had not been out of a barn since being flooded in 2011. Its overhauled motors came in over the winter, and it was a race to see if the car would be ready by Members' Day, which it was, by about a week! 2898 made just two trips during the day. As a single-ended car, operation is awkward, requiring the pole to be swung over the center of the car and a qualified member to flag the reverse movement. 2898 therefore rarely goes down the line, and had not been used since Members' Day 2010. It was full on both trips.

Another very popular car was Brooklyn 1792. This was its first Members' Day, but no ceremony per se since it had debuted at the 2015 Annual Meeting (see previous issue). It made three trips with standing room only. Work cars 302 and 1504 ran as double-headers. 302 debuted at Members' Day 2015 and 1504 has been used for several Members' Days following its restoration. With limited standing room (and basically zero seating), these trips also ran full. There was quite a bit of interest in 2001, an old workhorse of the revenue car fleet that also returned to Members' Day action for the first time since the floods. It too was debuted at the last Annual Meeting. Regular revenue cars 775, 948, 1602 and 357 also operated. In the rapid transit department, 6688 ran as a single car, while 1689 and 5466 were coupled in a train.

There were a few logistical handicaps. There was a shortage of places to set cars off the main line, because of the continuing logjam of equipment that was displaced in the fall of 2015 by the run-around project (see last issue). That situation is gradually improving as the building 9 tracks are placed into service. We've also been having an issue with the single-point switch at the high-level platform as it interacts with big-wheeled (rapid transit) cars. To avoid any problems, we did not use the typical "tail track" operating pattern with the RT equipment on 11 and 13 tracks, and instead left 1689-5466 at Avenue L all day, with 6688 boarding via the portable stairs.

A developing problem which is a good one is that with more and more equipment being operable, we are running out of time to run it and space to stage it. E.g. this year we had to leave 503, W-3, 3152, 9137 and 850, all of which were roadworthy, in the buildings. Next year we might hope to have 316, 2350, S-36, 1911, 500 and perhaps more ready for Members' Day...when would we be able to run all of them and give everyone a chance to ride, photograph and potentially operate? The museum staff is considering several ideas, such as expanding the event into a whole weekend, or adding a dinner option with evening operations. Your thoughts are welcome!

Elevating the Collection

Thanks to a mild winter, a concentrated volunteer effort, and the return of the Gateway Community College interns, there has been a great deal of progress since our last issue! We have met our mandate from FEMA to have enough trackage in service, above the flood elevation, to store all of the cars that FEMA will cover. These total 2,113 linear track feet, and as of this writing, we have 2,290 feet of track outside the flood zone.

Building 9 in Service

Unlike last winter, there were only a few weeks with weather too cold to work outdoors. During this period, the crew was inside Building 9. Ties and rails had already been positioned inside the building. The Bobcat gradually distributed them, first on 92 track, then 91, and finally working its way out the door on 91. After this point, we could no longer get the rubber-tired fleet inside the building. Track 93 had been opened just as our last issue was printed. The little stone hopper car was used to spread ballast on 93 track, using the stub of what would become 90-91 turnout to load it from the stone pile nearby. After ballasting, the entire indoor track was raised to level and tamped. The first car into building 9 was, appropriately, car 500. There was no ceremony on this cold early February day.

Work continued indoors, building tracks 92 and 91 from the back to the front. A small problem was encountered: when we received this "previously enjoyed" rail in trade from National Capital Trolley Museum, we did not get as many joint bar sets as we did lengths of rail. We had now run out of the bars that came with the rail. Not to worry, we placed an order for 40 sets of 60AS bars from Kovalchik rail salvage (from which we have also bought the 80AS rails, bars and tie plates). The bars didn't quite fit. The "NatCap" rail is very old (roll dates on the rail which are still readable are from 1888-1889) and originally from the Washington and Old Dominion. These rails pre-date the widespread use of the ASCE standard, and are a 58-pound, Penn. Steel section #7. There is a ⅛" difference in joint bar height. Therefore, all of these bars have been run through the milling machine in the shop to shave them down to fit!

Outside, a few more lengths of rail remained to be bent on 92 track. There is also a little reverse curve in this track, which was necessary to get both an ample radius and tangent in front of the building so that all cars in our collection will be able to negotiate the curve and clear the doorway. The tangents get shorter as we move toward the center of the layout. As with track 84, it was necessary to offset the track through the doorways on tracks 92 and 91. The reverse curve also keeps track 92 a bit more intermingled with the 90-91 turnout, which made spiking tricky. Essentially, the turnout had to be laid out and partially spiked first, then the ties for 92 track were nested to fit.

While this was going on, the 94 track curve was completely spiked and lined right through the doorway. Two temporary lengths of rail were stuck through into the building. When the pit is constructed, these will be removed and full lengths of 80AS rail will be laid across the pit. For now, we are using the 10 foot section of solid ground just before the pit to store the rolling air compressor.

Turnout 90-91 was also being constructed. This was the last one, so it was almost a matter of rote. The vertex bend in the diverging stock rail was made first, then the curve itself was bent. The stock rails were drilled for the heel blocks and the switch points were installed. A straight closure rail was cut to length and the frog was placed at the end of it. The straight side of the turnout (heading for track 90) was spiked completely. Then the curved closure rail was bent to radius and cut to fit between the frog and the heel block. The curved (91 track) side was spiked to gauge, guard rails and switch rods were installed, and we had ourselves a functional turnout, the last one in the ladder!

Now into March, track 92 was through the doorway. We deferred indoor work since it would be unfortunate to waste good outdoor weather. Leave some work for a rainy day, but as it happened, there were very few rainy days in March or April! Track 91 curve was bent to radius and spiked. First the north rail was put down entirely as the "line" rail, then the south rail was spiked to gauge. By mid-April, 91 track was also through the doorway and into the building.

Still oddly short of rainy days, work moved back inside to connect the 80# rail to the 58# rail within the building. The "compromise" joints were installed and with some spiking and lining, track 92 was done. The track was put into level and tamped during the first week of May. To date, cars 27 and 3662 have been put inside on track 92. Meanwhile, the remaining lengths of 58#

Student interns from the GWCC program (L) using the rail bender to pre-curve lengths of rail for 92 track. (R) Spiking the south rail to gauge at the frog of 90-91. The yellow tool pulls or pushes the gauge as needed and holds it. The track workers are "nipping up" the tie and using the pneumatic spike driver to set the spikes. *(J.Hakner)*

rail to finish 91 track were cut to length, joints made, and spiked down. As of this writing, the track is about to open.

Track 85

After outdoor work on 92 and 91 was done, tie layout began on track 85, sweeping out a left-hand curve from the end of turnout 84-85 (which was placed in service during fall 2015) and running parallel to the (R.R.) south wall of Building 8. The track is sufficiently far away from the wall (100" to the centerline) to create a safe clear zone between cars and the wall. Track 90 will also be 100" from the wall to the centerline, leaving 160" between centers of 85 and 90.

A crossover is planned between tracks 85 and 90, as depicted in the centerfold map. This has two functions: It allows track 85 to be used in the future as a "stub terminal" track for special events, e.g. to deliver people directly to the Haunted Isle. It also completes a "wye" with the new loop track which will allow cars to be turned end-for-end.

As we get to this part of the project, economy is key. We are reusing materials that we have on hand, which will save us approximately $19,000. Old 80AS rail which was on our mainline until being replaced with heavier rail in the 1970s is being used on the straight track. This rail has a lot of head wear but it is still usable on this low-speed yard track. We avoided using it earlier in the project because of the curves, switches and grades, none of which are an issue on 85 track. The 85 track end of the crossover is a familiar friend, the former 21 track single-point switch which was removed in 2014. For the 90 track end, we are still sorting through various single-point switch parts and frogs that are stored down the line, acquired decades ago in the hope that someday they would be useful. Their day may now be here. Point-and-mate switches are being used here because they are more suitable to a paved area. It is planned to pave (at least with crushed stone) the "Broadway" between the two buildings.

Using this old ConnCo rail brought up another issue which has been a recurring theme during this job: joint drilling patterns. The standard drilling for both 60 and 80 AS rail is 5-5-5, meaning a 4-bolt bar with 5" between the bolt holes. The 80AS rail that we have been using for most of the project was drilled 5½-5½-5½ and we got the matching bars with it. ConnCo was a fan of 7-5-7 joint bars. Also in the mix, we have 5-7-5, 4-8-4, 8-4-8, and even the ominous 6-6-6.

As of this writing, ties and rails are distributed the length of 85 track. It is entirely spiked through the curve and partially into the 90-85 turnout. Only the straight side of the turnout will be finished at this time, although the switch ties are laid out for the diverging side too. This is to keep access open through the area, e.g. for Haunted Isle later this season.

Work Remaining

By the time this issue reaches you, 85 and 91 tracks should be in service, and we are out of ties and rails until our next order comes in. The two remaining outdoor tracks are 90 (including the crossover to 85) and the Burch Memorial Loop. The former may be deferred until after the Haunted Isle is over, since during construction of it access to set up the Isle for 2016 would be impaired. The loop can begin as soon as materials are here. This is the tightest continuous curve in the project, with a radius of 90' and subtending an arc of 137°. Not only will both running rails need to be bent every foot with the hydraulic bender, also a guard rail will be required, along with guard rail spacer blocks, bolts and support chairs every 4 feet. This is the most labor-intensive part of the project.

The other major goal is to get 94 track in service. This track contains the pit, 100' long. The museum is currently evaluating bids by qualified steel erectors to fabricate the support structure, which was previously designed during the initial construction process by a licensed structural engineer. The pit will be a stark contrast to our current pit, which was built ca. 1971. Steel columns spaced 6'8" apart are spanned by a beam composite of an 8" I-beam and 10" C-channel. The 80# rails will rest atop the beams, secured by crane-rail style clips. This structure will support any car in our collection (a design weight of 120,000 lbs.) and will provide two car lengths. The concrete floor slab, which is already in place along with the concrete side walls, supports the use of heavy-duty lift tables so that compressors and other heavy under-car equipment can be removed and installed.

Having the pit open is important for sustaining the momentum of our flood repair program, in addition to improving maintenance overall. Many cars in our collection can not go on the current pit, because they are too long, too heavy, or have the wrong

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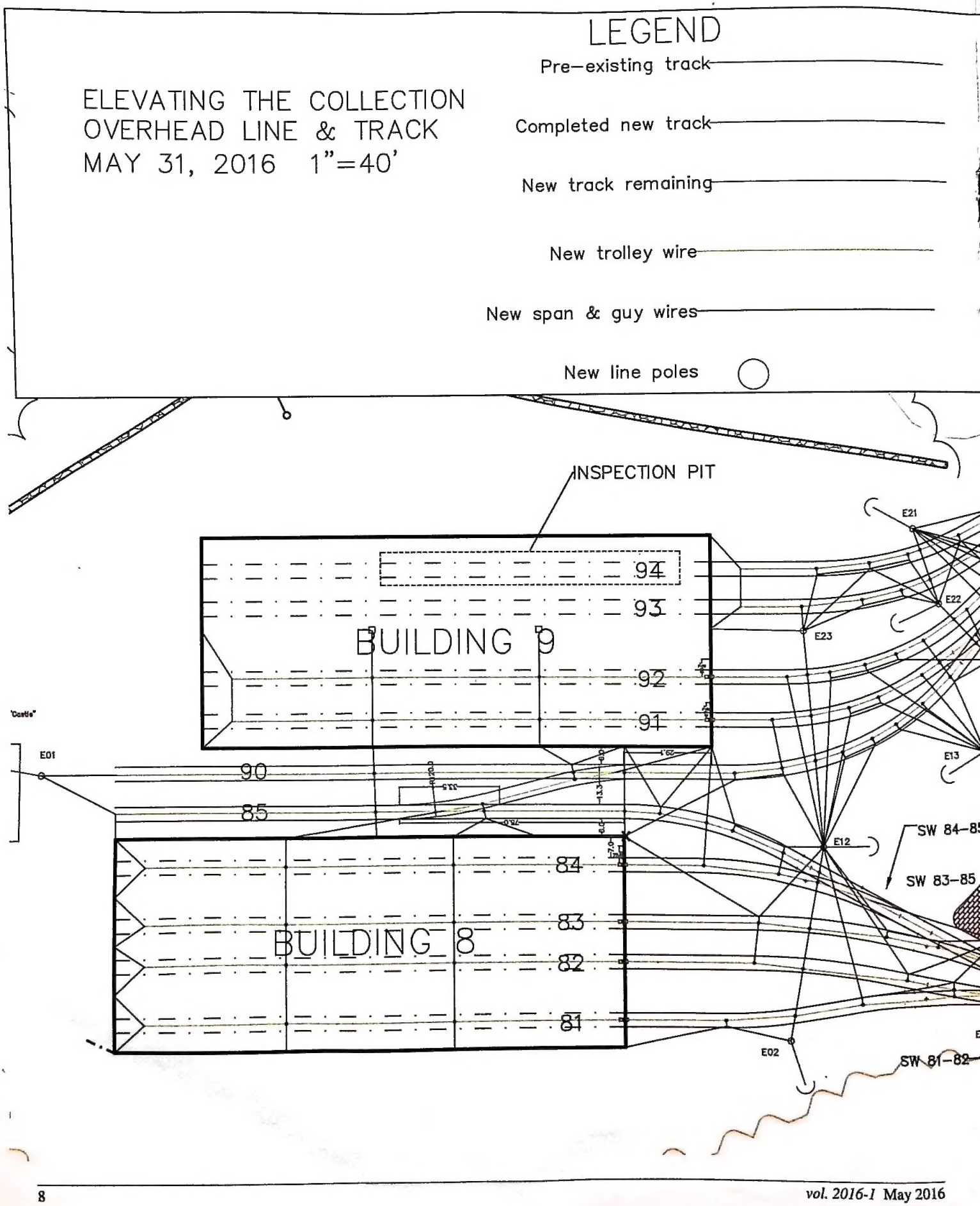
(L) Making a joint for the next length of rail, track 85, about half-way through the curve. (R) All rails and ties for track 85 have been laid out. The tie pattern for the 85-90 crossover is in the distance. When this photo was taken in May, only the rail in the foreground had been spiked. (*J.Hakner*)


LEGEND
Pre-existing track
Completed new track
New track remaining
New trolley wire
New span & guy wires
New line poles
ELEVATING THE COLLECTION
OVERHEAD LINE & TRACK
MAY 31, 2016 1"=40'
INSPECTION PIT
BUILDING 9
94
93
92
91
BUILDING 8
90
85
84
83
82
81
E01
E02
E12
E13
E21
E22
E23
SW 84-85
SW 83-85
SW 81-82

SW 93–94
E18
E17
TC–2
TC–1
E19
SW B–94
E20
TC–3
SW 90–94
19.5' above railhead
TC–4
approx 18' above railhead
E16
SW 90–92
E15
SW 90–91
E14
TC–5
BARN 2
"EDWARD H. BLOSSOM" 22
"AVE L"
PLATFORM
TC–6
BURCH MEMORIAL
LOOP TRACK
E11
DONORS' BRICK
AREA
TC–7
E07
TC–8
E04
E05
E06
#38
SW 81–B5
SW 81–B
This pole has already been set
OUTBOUND MAIN

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Thanks to the nearly 400 donors below who supported the museum in 2015 with a donation and/or upgraded or maintained their membership at the 500 Club level! Through your philanthropy, the museum has been able to bring more of its collection back into operation, provide a safe home for it, and enhance its educational public programming.

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TOP: Horsecar 3 is ready to be put back on its own wheels after nearly a century! This photo shows the interior tension brace. ABOVE: John Aurelius issues his *lux fiat* in Building 8, with power service turn-on in March. BELOW: The 2016 Gateway Community College Railroad Engineering Technology internship students. This was the fourth class to participate in this partnership between the trolley museum and GWCC. (l-r) Brandon LeQuire, Freddy Gueverra, Mark Palmieri, Denard Marsh, Robert Denhardt, John Celotto, Nico Rasile, Stephen Hardy, Shane Rasile, Andrew Grazio. (*J.Hakner*) BOT L: Stephanie Zelazo scrapes down a doorway divider in car 503. Father Alan was the photographer.

Collections Rehabilitation Program

Since our last issue, there has been substantial progress on the multi-year project to rehabilitate our vehicle collection after the flood damage suffered in storms Irene and Sandy. The latter disaster assistance claim with FEMA is now active, meaning we have two open claims, worth a total of over $3.0 million in repair work. However, it is important to remember that FEMA only covers 75% of the *actual* cost of the repairs, and that it is a reimbursement, meaning we must have the money in hand to repair a given car and pay the bill in full. Only then, and after a period of 6-8 weeks, do we get reimbursed for 75%. The museum's 25% cost share comes out to a grand total of about $750,000 over the life of the two programs. To date, the museum has raised (and spent) about 30% of that total.

Completed cars

There are 55 cars disabled by the Irene flood that are covered by FEMA. As of this report, 9 cars have been completely through the recovery process, with motors pulled, sent out to a qualified electrical motor shop for complete disassembly, inspection, cleaning, re-insulation, re-assembly and testing. These motors were tested again upon return to the museum, installed on the cars, and then given several final test-runs before releasing the car back into service. This is a time-consuming process. Although some cars were done in just 3 months, the average time for the entire cycle is about a year.

Car 6688 was completed quickly, in 2013, and was the first car through the program. It required minimal work. Car 356 was also completed quickly, by utilizing good spare motors that had not been flooded. The 2014 year was a slow one. Numerous cars were begun and all required extensive work. In 2015, five cars were completed! It began with the debut of 302 on Members' Day, followed by 2001 and 9137 in the summer, 1792 in the fall, and finally 865 in December 2015. 9137 also required compressor work, so the above completion date references the Irene part of the FEMA claim. Once our Sandy award was opened, late in 2015, the compressor was repaired also. This part of the job was completed by April 2016.

During 2016, we can already cross two more cars off the list! Toronto 2898's motors and compressor came back over the winter. The car came into the shop during March and was back together in time to debut at Members' Day. ConnCo 2350 is a two-motor car and it went fairly quickly. Its motors were pulled in January and came back in mid-May. The air compressor was also removed and overhauled at the same time as the traction motors. Re-assembly of all components took only about one week! Both 2350 and 2898 have been put into safe storage in Building 8.

Sponsorships

Donations to the Annual Fund drive support the motor repair program. In addition, the museum has received donations for specific cars. The museum's share of the cost varies from car to car, but averages $6,500. So far, a number of museum friends have stepped forward to "sponsor" a particular car when they, either as an individual or small group, donate the entire amount needed to cover the museum's cost share in repairing that car. The museum has also received grant funding. Car 865 was funded by grants from Amherst Railway Society, Mystic Valley Railway Society, and member donations to the Annual Fund. Car 302 was covered by a single grant from the Mass. Bay Railroad Enthusiasts. 1792 was sponsored in part by member Jimmy Boylan. 2001 received partial funding via a 20th Century Electric Railway Foundation grant, matched 1:1 by member donations. 9137 was funded in part by donations from members Anthony Bianco, Paul Davy and Bob Thain.

Car 2898 is a good example of a car that has benefited from many individual donations -- not car-specific -- to the Annual Fund. 2350 is one of several cars that is being funded through a multi-year grant program with the Community Foundation for Greater New Haven (CFGNH).

Works in Progress

Single-truck car 316 had been on the list of "temporarily repaired" cars that the museum, at its own expense, washed and dried with forced hot air before the FEMA award was granted. An admonition was sounded at the time, that these are temporary repairs and really require a full disassembly to remediate hidden damage. That proved true with car 316. Now that the motors have been pulled and brought to the motor shop, we know that the failure of one traction motor in service during April, 2014 was most likely from lingering saltwater contamination. This motor requires a complete armature rewind. The other motor required just cleaning and re-insulation, and is ready to go back in. Work on car 316 is funded in part by the CFGNH grant.

Toronto (ex Eastern Mass, ex Third Ave) sweeper S-36 came into the shop right after Members' Day and motors have been removed. Members Ken Rosen and Rob Paradis sponsored the cost of motor repair work. As a Toronto car, the trucks as received by the museum in 1973 were for 4'10⅞" track gauge. The museum disassembled the trucks and sent the loose wheelsets to Mackenzie Machine Shop in New Haven to have the wheels pressed in slightly to fit our track gauge (4'8½"). In wheel press work, the controlling measurement is the "back-to-back" (the distance between the vertical inside back faces of the flanges). Wheels designed for railroad interchange adhere to the AAR standard and have thicker flanges than wheels designed for street railway work (AERA standard). This means the back-to-back is smaller for a railroad profile wheelset. For reasons that are not clear, one of S-36's wheelsets was pressed to the AAR measurement while the other three were correct. Thus for 40+ years, this car had an annoying tendency to derail at switches. Now was a great opportunity to fix it. Members Dennis Pacelli, Joe Marcarelli and Rob Paradis volunteered their time (this was not FEMA reimbursable) to disassemble the affected truck beyond motor removal. The axle in question was taken over to Mackenzie while S-36 remained supported on the jacks. To our pleasant surprise, they pressed the wheelset back to the correct setting, no charge! Thanks to Ken Mackenzie and family for honoring one heck of a warranty claim! S-36's trucks are back together and the motors will go out for rebuild soon.

Car 500, the pride of the fleet, is funded in part by CFGNH, and in part by member response to the "500 Club" membership upgrade promotion. The motors are still at the motor shop. Cleaning and re-insulation has already taken place. We are waiting for the bearings to be re-lined and hope to have the motors back during the summer. If there are no additional problems discovered, this car could be back in service in time for the Annual Meeting.

ConnCo open car 1425 has four GE-80 motors which came back

from the motor shop on June 1st. These motors required extensive work including re-lining of all the armature bearings, and had been out since August 2015. They are now being run-tested in our shop and will then be sent to a different contractor which specializes in mechanical and truck work. The model O-50 trucks for this car are already at this shop. Motor work on 1425 was sponsored by grants from the Branford Community Foundation, the Tom E. Dailey Foundation, and the Amherst Railway Society.

ConnCo 1911 was once an every-day car on the F-Branford route. Cars of this 1900 series closed out the service in 1947. Thanks to a private donor who wishes to remain anonymous, motor work on this car has been entirely funded. The motors were pulled in February and are now at the motor shop.

Car 4573 has unfortunately been stalled for a while. It requires wheel truing work which is not FEMA covered. The overhauled motors have been back for over a year now. Members Lou Guadagni and Greg Gil sponsored the work on this car. Wheel cutters have been made. The car will have to be on shop trucks while the wheel work is underway. Recently, one of the necessary shop trucks was retrieved from storage and prepared. The car has also been moved to a location where it can easily be accessed while on shop trucks. We hope to have the car in the shop over the summer to begin the wheel truing process. At that time, the air compressor (which was completely under water in Sandy) will be removed and sent out for rebuild.

Car 1001 is another BQT favorite for which overhauled motors have been back but further work is stalled. This car has a complex control system which suffered partial flood damage in Sandy. It is not feasible to remove this as a component and send it out. Work must be done piecemeal over a pit. Any costs, such as rewinding contactor coils, will be claimed under Sandy. The traction motors have already been paid for and reimbursed under the Irene award, and partially funded by a 2013 grant from the National Railway Historical Society. Because of the need to have the car over a pit for potentially many weeks, during which time it will be inoperable, we'll have to wait until the 94 track pit is constructed. Between running maintenance and the recovery program, this sort of long-duration occupancy can not be had on our solitary existing pit.

Funded Upcoming Work

As this issue was going to press, car 220 was coming into the shop for motor extraction. This car has truck and motor configuration nearly identical to car 316. Its work is funded in part by the CFGNH grant. We also expect to extract the motors for car 61 later this year, which will also be part of the CFGNH work.

7 additional cars have sponsorships. Cars 34 and 2431, both of which ran in New Jersey, have partial funding from the same donor who does not wish to be identified by name. Car 709 (a heavyweight, high-speed interurban) has been sponsored by members Steve Rudolph, Ken Rosen and Bill Weber. Motor work on Third Ave. cars 830 and 884 has been sponsored by member Walter Rothaug. IRT "Hi-V" subway car 3662 has been sponsored by member Bruce Payeur. Funding is also in place via a restricted bequest from the estate of Philip Wintner to repair Third Ave. car 629.

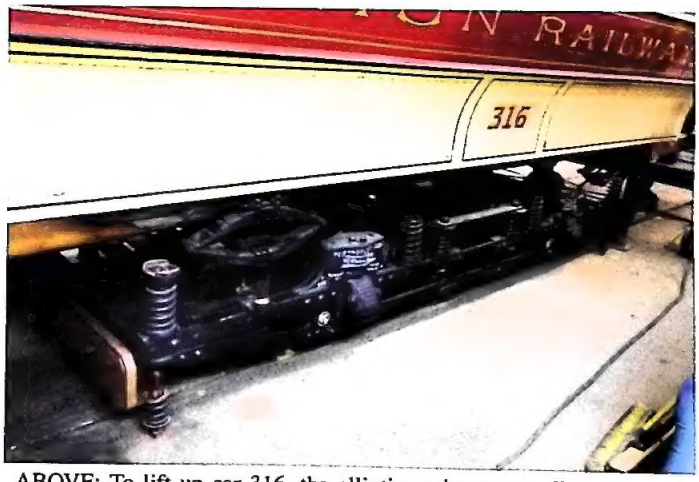
It is hard to predict exactly when these cars will each come into the shop to begin the rehabilitation process, and certainly some of them will not get started until the 2017 season.

Going Forward

It is very encouraging that as of this writing, 3½ years after the Sandy disaster, we are beyond the half-way point: 9 cars are complete, 8 in progress, 8 more funded by grants or private sponsors. We also expect that in the second and third years of the CFGNH grant, at least 8 more cars will be funded. That's 33 of 55 cars. Then there are 13 cars that were temporarily repaired but should be disassembled and reconditioned to avoid potential future, costly breakdowns. Only one of these is fully funded for permanent repair work.

The "scoreboard" for the program changes frequently, and the latest can always be downloaded at
`http://www.bera.org/recovery-status.html`

The officers, trustees and staff of the Shore Line Trolley Museum appreciate your support of the collections rehabilitation program, and are happy to discuss details of the program and potential car sponsorships with you. Reach us via phone (203) 467-6927 or email `office@ShoreLineTrolley.org`.



ABOVE: To lift up car 316, the elliptic springs were disconnected from the truck and the coil springs from the body, which was lifted with an I-beam under each bulkhead. BELOW: One of the GE-203 motors is lifted from the Std. C-50 truck of car 1911 by Joe Marcarelli. (*J.Hakner*) Additional repair photos are found on page 15.

Car 865 – A Brief History

Connecticut Company 865, featured on Members' Day, was part of a 60-car order placed in 1905 with Wason Manufacturing Co. (in nearby Springfield, Mass.) by the Consolidated Railway. The Consolidated was the wholly-owned street railway subsidiary of the mighty New Haven R.R. empire. In 1907, the company was reorganized as The Connecticut Company and continued to operate almost all of the street railway lines in its namesake state until the end of service in 1948.

Based on dates of Dec. 1905 stamped into wooden parts that were discovered during the car's restoration in the 1995-2005 time frame, it would seem that the car was delivered early in 1906. Roster data compiled from numerous original sources by the late Fred Bennett and the late Bill Young show a delivery date of December 30, 1905. It is possible that this date was booked to clear the car from the builder's inventory for accounting purposes. Of this larger order, the cars numbered 475-484 and 501-515 and delivered at this late 1905/early 1906 date were assigned to the suburban routes of Consolidated's New Haven division. Since Consolidated/ConnCo was composed of numerous different purchased or leased companies, there were overlaps in the state-wide numbering (for example, you can bet many cars were numbered 1). In 1915, the Connecticut Company initiated a fleet-wide renumbering, placing groups of cars into contiguous number ranges and also arranging the entire sequence in a roughly chronological order. Thus car #512 of the above order became ConnCo 865, which it has worn ever since.

Some technical facts: Car 512/865 was delivered with Taylor SB trucks sporting Westinghouse 101B motors geared 19:65 (for higher-speed suburban duty; the car has a "cruising speed" of about 40 MPH), a K-6 controller and a Westinghouse Traction Brake D1-EG compressor. During the first few decades of its life, 865 would have appeared regularly on routes such as the "F-Branford" which is now the museum line. The arrival of steel cars of the 1900 series in the late teens displaced these older wooden cars. Several car assignment sheets from the 1920s show 865 as working out of the Grand Avenue (inters. Blatchley Ave.) barn as an "extra" suburban car, meaning it was not assigned to regular runs, but used as necessary for an extra trip (e.g. a large group) or to fill in for a car that was down for maintenance. Dated transfers found in the recesses of the car establish it as having run on the F-Branford route in April 1928. Ca. 1930, the trucks were upgraded to Standard Motor Truck Co. O-50, not new, but most likely available as surplus from open cars that were then being scrapped. The compressor was replaced by a DH-16 model.

At 8:15 PM on October 26th, 1931, car 865 struck and killed an elderly woman, Elizabeth Sondergeld, while running on the F route, just east of the museum's current end of the line between Double Beach and Brockett's Point. The motorman, Richard Hannon, was absolved of blame for the accident, according to the Public Utilities Commission report.

All through the 1930s, the car survived as an extra car and then during the 1940s, as the trolley preservation movement gained traction (forgive the pun), was a popular car for use on fan trips all over the New Haven division. Correspondence in the Fred Bennett files shows that in January 1948, Vice President R.J. Bennett (no relation) of the Connecticut Company made car 865 available for purchase by the railfans. It was part of the great exodus of cars from the James St. carbarn to the museum property on the weekend of March 13-14, 1948, as H-Momauguin service was being cut back and the ConnCo DC power to Hemingway & River was about to be cut off forever.

Like many other cars in the collection, car 865 deteriorated from outdoor storage until it was housed in the early 1960s. Not very much happened with the car until ca. 1995, when John Koella, George Baehr and other fans of the Connecticut Company began a restoration. George Papuga ultimately became the leader of this project, which involved significant structural repairs to the roof, side sheathing and platforms. By 2008, it was complete enough to be showcased on the 60th anniversary of the end of ConnCo trolley service. The floods of 2011 and 2012 were a setback that was overcome thanks to the support of many individual and foundation donors. There are still a few details that need to be addressed before car 865 can become a regular revenue car in the museum's fleet.

Additional information on the Connecticut Company appears in articles by Don Engel and by Bill Young in the Feb. 2003 and Oct. 2008 issues of The Tripper.

865 is southbound on Quinnipiac Ave. in the Annexed District of New Haven, Jan 25, 1935. The house in the distance, which still stands today, is at the corner of Quinnipiac and Hemingway St. (*BERA Library P376 / C.R. Harte coll. #12967*)

On Feb 20, the museum hosted an informal convention of northeast-area trolley museums. Our guests received a sneak preview of 865 which was captured here, crossing the Quarry Trestle, by member Bill Monaghan.

from pg. 7

wheel profile. The new pit does not have any of these issues. It will allow repair work to proceed on rapid transit cars (such as 1227 and 3662), interurban cars (e.g. 116 and 709) and locomotives (5002, 12, Amy), to name just a few cars on the list.

Another major remaining piece is overhead line. Not much has happened since the last report, since the focus has been completing the track to comply with the FEMA deadline. In the centerfold of this issue is an updated map, showing completed and remaining track, and the design for the overhead line system. The 2/0 size trolley wire needed for the project has been obtained. Line poles will be ordered soon which will allow at least partial construction of the wire and will greatly simplify moves to and from buildings 8 & 9. Several line poles need to be set and part of the loop track needs to be finished in order to create the Donors' Brick Walkway, the location of which is highlighted on the map. This area has been situated where it will not be damaged by vehicular traffic or future utility conduit work.

Going from DC to AC, Eversource (formerly Northeast Utilities, Connecticut Light & Power) energized our new service. We now have 600A of 120/240VAC power available at the site. 200A is allocated to Building 8, 300A to Building 9, and the remaining capacity is reserve. To put this in perspective, our existing CL&P service (installed 50+ years ago) which feeds barns 1,2,3,4,5,6,7, the shop and miscellaneous loads such as the railway signal system, is only 200A. We also have a lighting design for both buildings, stamped by a P.E. We hope to raise funds during the spring fund drive which will allow lighting to be installed in both buildings this year. We also hope to start on the concrete floor slab for Building 8.

It seemed unfathomable in 2011, viewing the rough terrain of the former "Island," that we'd be looking at two new buildings in such a short time. And yet, there they were as we closed out 2013. It seemed an equally faint hope that a few years later we'd be admiring two 5-track ladders such as we can today, with over 2,000 feet of flood-proof track placed in service. We can imagine the imminent completion of this project, with level concrete walking surfaces and bright lights allowing easy access to the collection stored in these buildings, a new loop and wye in service, 100' of new pit space, and live trolley wire making it a routine matter to access these buildings almost as easily as we access barns 1 and 3 today.

(l-r) Liz & DJ Zelanakas, Paul Davy and Bob Sampson work the little stone hopper. (*W.Sandford*)

TOP-BOT: Re-lined armature bearing for car 1425's motor is unwrapped at the Schulz plant. Joe Marcarelli and Mat Lyons install overhauled WH510 motor for car 2898. Mat Lyons and Joe Marcarelli roll out truck from S-36. (*J.Hakner*) 2350 on a test run at the Quarry Trestle. (*D.Pacelli*)

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Elevating the Collection

Track work nears completion, FEMA mandate met

Building 9 ladder complete, April 2016. See story, page 6 (*J.Hakner photo*)